epiTRENDS

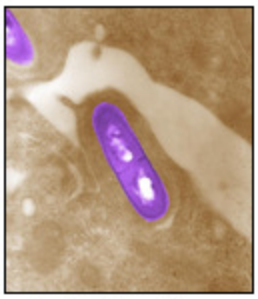
A Monthly Bulletin on Communicable Disease Epidemiology and Public Health Practice in Washington State

Listeriosis

Vol. 14 No. 3

03.09

Listeriosis, illness due to *Listeria* infection, is a public health concern because, although listeriosis is rare in the United States (only 0.3 cases per 100,000 people compared to almost 15 for salmonellosis), the mortality rate is high for certain susceptible groups.



Listeria bacterium in tissue
Photo courtesy of CDC
Dr. Balasubr; Peggy Hayes

The Organism and the Disease

Listeria monocytogenes is shed in the feces of clinically ill and sub-clinically infected animals. This is the major source of contamination of soil, animal feed, and water. Foods such as unpasteurized milk and cheese, hot dogs, deli meats and raw vegetables have been associated with listeriosis outbreaks. Contaminated meat products in Canada caused a large outbreak affecting multiple provinces in 2008 with 57 cases and 21 deaths.

Listeria infections in humans usually result from ingestion of a contaminated food item but most people who ingest *Listeria* do not become sick. If illness develops, the incubation period is usually three weeks but ranges from three to 70 days. Symptoms include fever, muscle aches, diarrhea, and nausea. Listeriosis is generally not diagnosed because intestinal illnesses are usually minor. Even when testing is done, routine stool cultures do not detect *Listeria*. When infections progress, serious illnesses, such as meningitis or sepsis, can result.

Pregnant women are 20 times more likely than healthy adults to get listeriosis and a third of reported cases are associated with pregnancy. Infections in pregnant women are especially concerning because *Listeria* can cause miscarriage, premature delivery, stillbirth, and serious infection in newborns. These tragic outcomes can occur even if the mother is only mildly ill or does not have any symptoms. Elderly adults, people with weakened immune systems and newborns are also at increased risk for more serious illness. The mortality rate for these serious illnesses is very high, over 60% in older adults and up to 50% in infants infected prenatally.

Continued page 2

Washington State Department of Health

*epi*TRENDS
P.O. Box 47812
Olympia, WA 98504-7812

Recent *Listeria* Activity in Washington

Washington listeriosis rates are comparable to national rates; about 10 to 25 cases are reported each year. During the last several years in Washington, a concerning trend has emerged -- an increase in listeriosis cases occurring in young, pregnant, Hispanic women. In 2009, of the six primary cases reported to date, four were in pregnant Hispanic women. These cases resulted in the loss of pregnancy or serious illness in the infant. The molecular pattern from pulsed field gel electrophoresis (PFGE) of *Listeria* isolates from these four case-patients is identical, suggesting a common source of infection. Unpasteurized queso fresco, a Mexican-style soft cheese, is the suspected source. Previous outbreaks have been associated with this type of cheese, particularly cheese homemade from unpasteurized milk.

Preventing Listeriosis

Preventing listeriosis is done at many levels. Because *Listeria* is ubiquitous in nature and the equipment used in food production, the U.S. Food and Drug Administration (FDA) establishes a regulatory limit allowed in food. When licensed food manufacturers use food good manufacturing processes and pasteurized milk, these limits are rarely exceeded.

When listeriosis cases are identified, the primary goal of local health jurisdictions (LHJs) is to identify the contaminated source of the infection so that others do not get infected. An attempt should be made to determine where the cheese or suspected contaminated food was obtained and to collect any remaining food with its packaging for testing at the Washington State Public Health Laboratories (PHL). An interview tool designed to elicit precise information on the variety of potentially unpasteurized, Mexican-style soft cheeses eaten by case-patients is available from the Department of Health. Although laboratories are not required to submit *Listeria* isolates to PHL, LHJs should request that isolates be forwarded so molecular typing can be done to detect outbreaks.

The Centers for Disease Control and Prevention (CDC) has developed a special initiative to study and prevent listeriosis. In 2000, listeriosis became a nationally notifiable disease. In 2004, CDC launched the *Listeria* Initiative, a program meant to improve the investigation of listeriosis clusters. To contribute to this effort, state and local health investigators are asked to complete a detailed food questionnaire on each reported case. The questionnaire is available at http://www.cdc.gov/foodborneoutbreaks/documents/ListeriaCaseReportFormOMB0920-0004.pdf

Reducing listeriosis is one of the Healthy People 2010 goals developed by the U.S. Department of Health and Human Services. In addition to CDC's initiatives, the FDA and United States Department of Agriculture have developed educational and regulatory campaigns.

Continued page 3

_epi_TRENDS Monthly Posting Alert

To receive monthly e-mail notification of *epi*TRENDS, please register at this website:

http://listserv.wa.gov/archives/epitrends.html

Choose the option to join the listserve. Enter your name and email address.

To prevent listeriosis, everyone should take the following general food safety precautions:

- Avoid unpasteurized (raw) milk or foods made from unpasteurized milk.
- Thoroughly cook raw meat, such as beef, pork, or poultry.
- Separate vegetables, cooked foods and ready-to-eat foods from uncooked meat.
- Wash raw vegetables thoroughly before eating.
- Wash hands, knives, and cutting boards after handling uncooked foods.
- Eat perishable and ready-to-eat foods as soon as possible.

Images courtesy of www.FoodSafety.gov

In addition, health care providers and people at risk for infection can do more to prevent listeriosis. Providers need to educate their patients, especially pregnant women and people with weakened immune systems due to infection, cancer, or medication, about avoiding foods commonly contaminated with *Listeria* by AVOIDING the following foods:

- All soft cheese unless the label states it is made from pasteurized milk. Soft cheeses include Mexican-style cheeses (e.g., queso blanco, queso fresco, Panela), blue cheeses, Brie, Camembert and feta.
- Hot dogs, lunch meats or deli meats unless heated until steaming hot.
- Refrigerated pâtés or meat spreads (Note: It is safe to eat canned or shelf-stable[1] pâtés and meat spreads).
- Refrigerated smoked seafood (often labeled as "nova-style," "lox," "kippered," "smoked," or "jerky"), unless in a cooked dish such as a casserole. The products are found in the store's refrigerated section or sold at deli counters. Canned and shelf-stable smoked seafood are safe.
- Ready-to-eat foods from delicatessen counters or left-over food, unless heated/ reheated to steaming hot before eating.

At-risk persons should also avoid contaminating other foods, utensils, and food preparation surfaces with raw or refrigerated uncooked foods. Particular care should be taken to wash hands after handling hot dogs, luncheon meats, and deli meats.

Resources

- Contact Communicable Disease Epidemiology Section (206 418-5500) for listeriosis interview tools.
- Fact sheets for pregnant women (English and Spanish): http://www.fsis.usda.gov/Fact_Sheets/Listeria_monocytogenes/index.asp

[1] "Shelf-stable" refers to food that is safely sold in a sealed container at room temperature (e.g., vacuum sealed, irradiated, freeze dried). These foods generally require refrigeration after opening which may increase the risk of transmitting *Listeria*.